

CHAPTER III: TRENDS IN INFANT MORTALITY BY RACE/ETHNICITY

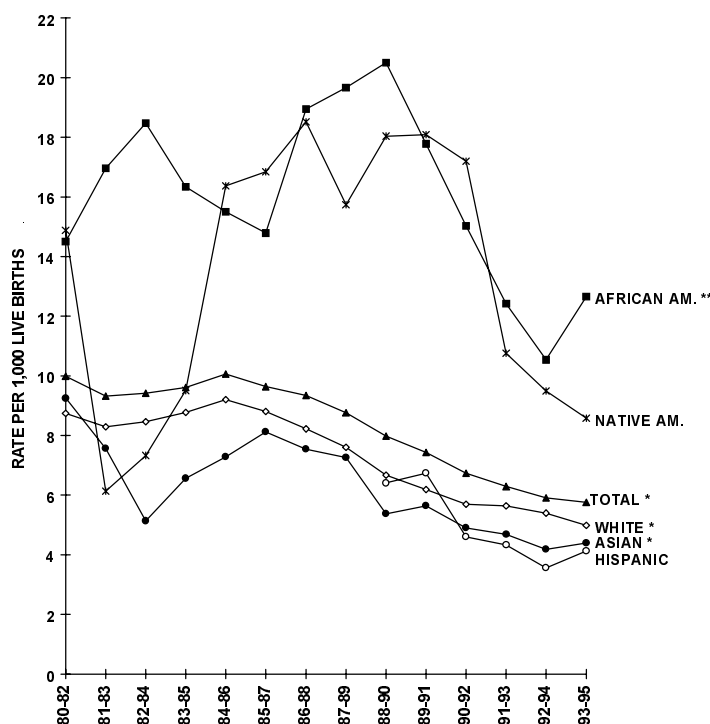
Concern about disparities in infant mortality rates across the racial/ethnic groups of King County was an important factor leading to the establishment of the Infant Mortality Review. In this chapter we evaluate trends in infant mortality, causes of death, and birth risk factors among different racial/ethnic groups.

Epidemiologic analyses frequently examine group differences in rates of disease or injury based on characteristics such as age, gender, and race/ethnicity. In recent years, the presentation of data broken down by race/ethnicity has been questioned by researchers and communities; they argue that readers may incorrectly assume that differences between groups are biologically based, and that the racial/ethnic categories used are not necessarily reflective of individuals' self-identification.

Most researchers believe that race/ethnicity is a marker for complex social, economic and political factors that are important influences on community and individual health, and that differences in rates of most diseases and injuries are not due to biologic or genetic differences among racial/ethnic groups. Many communities of color in this country have experienced social and economic discrimination, and other forms of racism, which can negatively affect the health of these communities. We continue to examine and present data by race/ethnicity because we believe that it is important to understand which racial/ethnic groups are disproportionately affected by significant health issues. We hope this understanding will lead to strategies that address these issues, as well as the social and economic inequities which underlie them.

1. GENERAL TRENDS

**FIGURE 3.1: INFANT MORTALITY BY RACE/ETHNICITY IN KING COUNTY
THREE YEAR ROLLING AVERAGES, 1980-1995**



* THIS TREND FROM 1980-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.

** THIS TREND FROM 1988-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.

SOURCE: BIRTH AND DEATH CERTIFICATES

Infant mortality varied significantly across the major racial/ethnic groups living in King County. The rates were higher than average among African Americans and Native Americans. Compared with whites, their rates were 2.4 and 1.9 times higher, respectively, during the 1991-1995 period. If their rates had been equal to the rate among whites, 11 fewer African American infants and 2 fewer Native American infants would have died each year during this five-year period. An average of 90 white, 19 African American, 12 Asian, 3 Native American and 4 Hispanic infants died each year during this time.

Among whites, the decline in infant mortality rate which began in 1985 has continued.

Among African Americans, the infant mortality rate in the 1993-1995 period

appears higher than that during the previous 1992-1994 interval (Figure 3.1). However, the relatively

small number of deaths makes the difference between the rates statistically indistinguishable. Whether the 1993-1995 rate signals a trend towards increasing infant mortality among African Americans or is a random fluctuation in a generally downward trend will only become clear with data from forthcoming years.

The small number of deaths among Native Americans makes trend interpretation difficult, but the downward trend in rate appears to have continued. Among Asians and Hispanics, the rates appear to have stabilized in the 1993-1995 period.

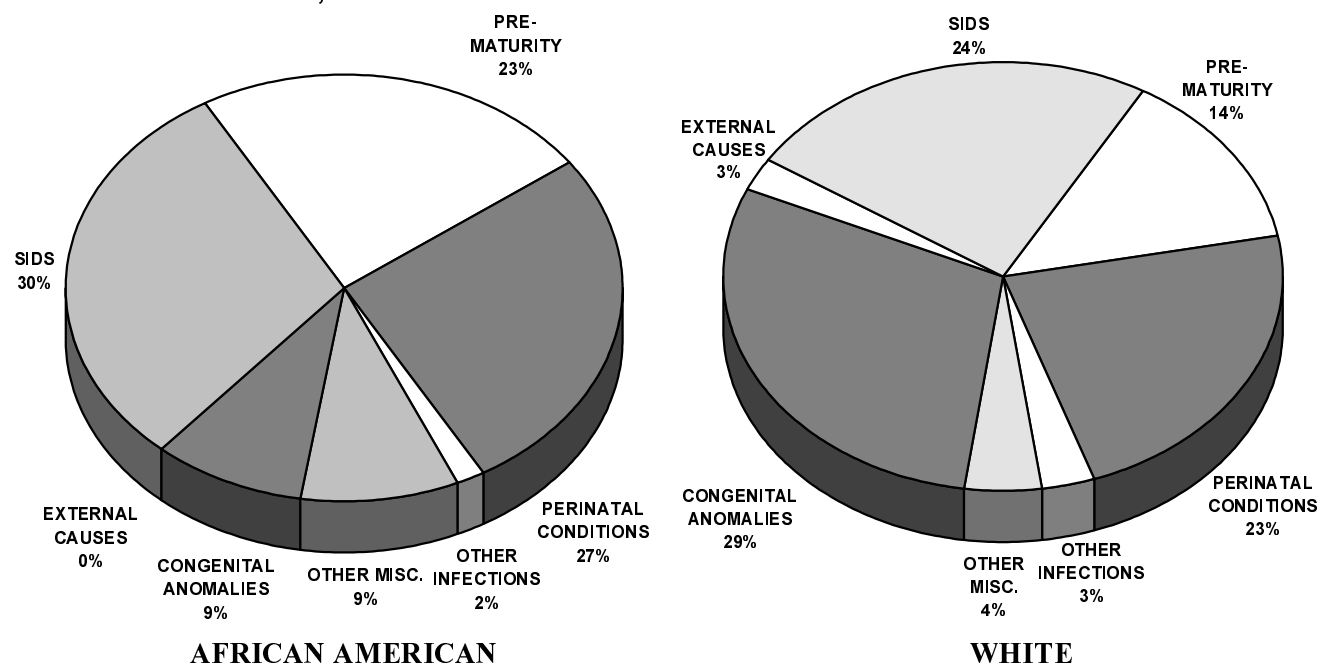
The persistent elevation in the infant mortality rates of African Americans and Native Americans is of concern. More work remains if King County is to reach the goal of eliminating disparities in infant mortality.

To understand the possible increase in infant mortality rate among African Americans in the 1993-1995 period, the following section describes the causes of death and measured birth risk factors among African Americans in comparison to whites.

2. TRENDS IN SPECIFIC CAUSES OF INFANT MORTALITY AMONG AFRICAN AMERICANS AND WHITES

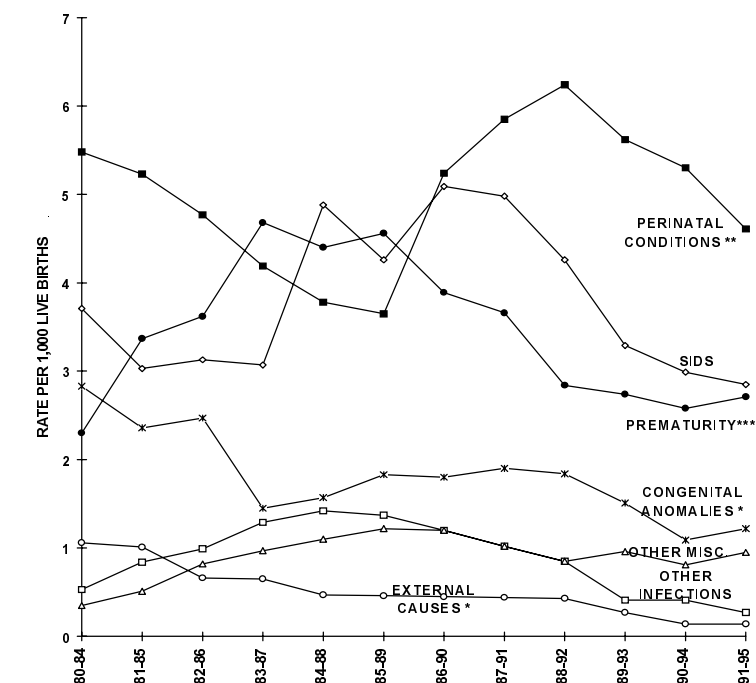
The leading cause of death among white infants in the 1993-1995 period was congenital anomalies, followed by SIDS and deaths due to perinatal conditions, similar to the 1992-1994 period (Figure 3.2). Deaths due to prematurity also figured prominently. The leading cause of death among African American infants in the 1993-1995 period was SIDS, followed by deaths due to perinatal conditions and prematurity. SIDS accounted for 30 percent of all African American infant deaths during the 1993-1995 period, compared to 21 percent in the 1992-1994 interval.

**FIGURE 3.2: MAJOR CAUSES OF INFANT MORTALITY
AFRICAN AMERICANS AND WHITES, KING COUNTY
THREE YEAR AVERAGE, 1993-1995**



SOURCE: BIRTH AND DEATH CERTIFICATES.

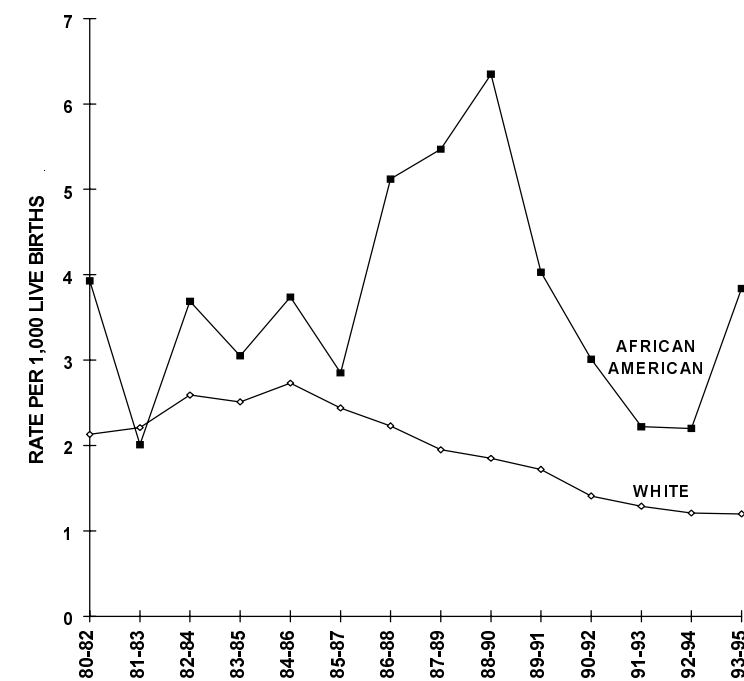
FIGURE 3.3: CAUSES OF INFANT MORTALITY FOR AFRICAN AMERICANS IN KING COUNTY FIVE YEAR ROLLING AVERAGES, 1980-1995



* THIS TREND FROM 1980-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
 ** THIS TREND FROM 1985-1990 IS A STATISTICALLY SIGNIFICANT INCREASE, AND FROM 1990-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
 *** THIS TREND FROM 1980-1987 IS A STATISTICALLY SIGNIFICANT INCREASE.
 SOURCE: BIRTH AND DEATH CERTIFICATES

While the death rate from prematurity among African Americans increased from 1980-1987, the rate declined from 1987-1992, however non-significantly, and has plateaued since (Figure 3.3). On the other hand, death due to perinatal conditions has declined from 1980-1985, increased from 1985-1990, and then declined one more time from 1990-1995. No recent changes occurred in deaths due to congenital anomalies or external causes. However, the overall trends show significant decreases from 1980-1995. No notable changes occurred to death due to other infections or other miscellaneous causes.

FIGURE 3.4: SUDDEN INFANT DEATH SYNDROME RATES AMONG AFRICAN AMERICANS IN KING COUNTY THREE YEAR ROLLING AVERAGES, 1980-1995



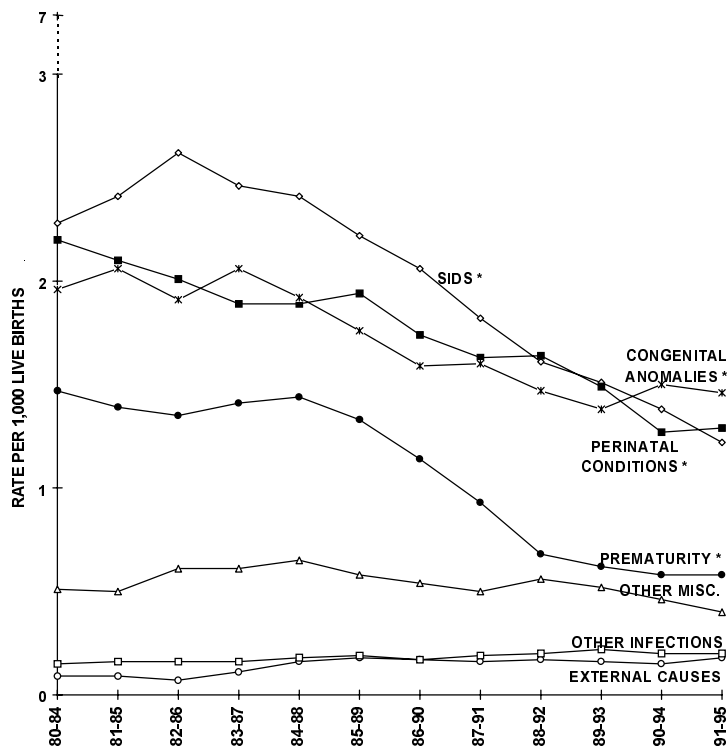
SOURCE: BIRTH AND DEATH CERTIFICATES

The decline in the SIDS rate for African Americans appears to have reversed (Figure 3.4,^a which shows the SIDS rate with three-year rolling averages). However, this trend is not statistically significant. The apparent increase in SIDS accounts for most of the increase in African American infant mortality rate observed between the 1992-1994 period to the 1993-1995 period. Determining whether the increase in SIDS represents either a true change in trend or random variation will require data from future years.

In contrast to the rate among African Americans, the SIDS rate among whites has not increased.

^a Figure 3.3 shows five-year rolling averages which further smoothed out the year-to-year fluctuations. Figure 3.4 shows three-year rolling averages, which better illustrates the upward trend in recent years.

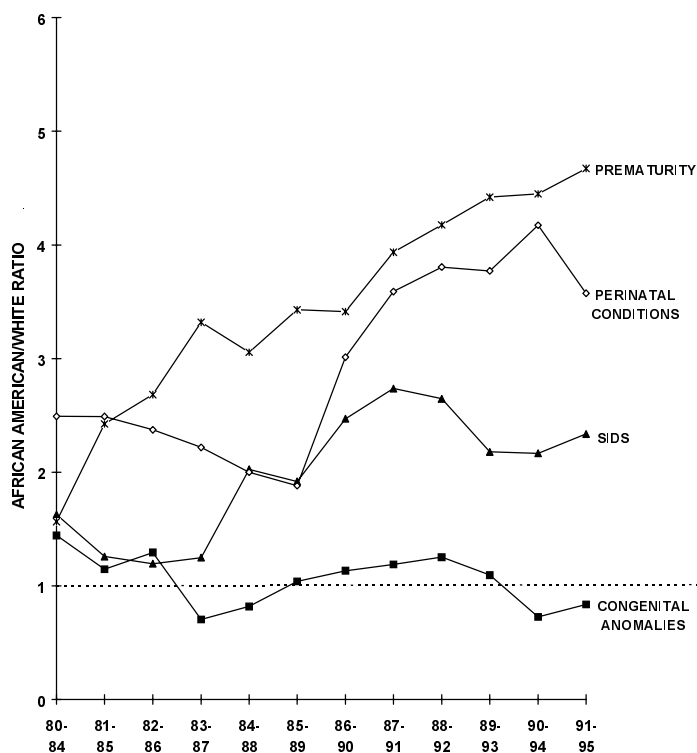
**FIGURE 3.5: CAUSES OF INFANT MORTALITY FOR WHITES IN KING COUNTY
FIVE YEAR ROLLING AVERAGES, 1980-1995**



* THIS TREND FROM 1980-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
SOURCE: BIRTH AND DEATH CERTIFICATES.

There was no change in the trends for the four major causes of infant mortality for whites (Figure 3.5).

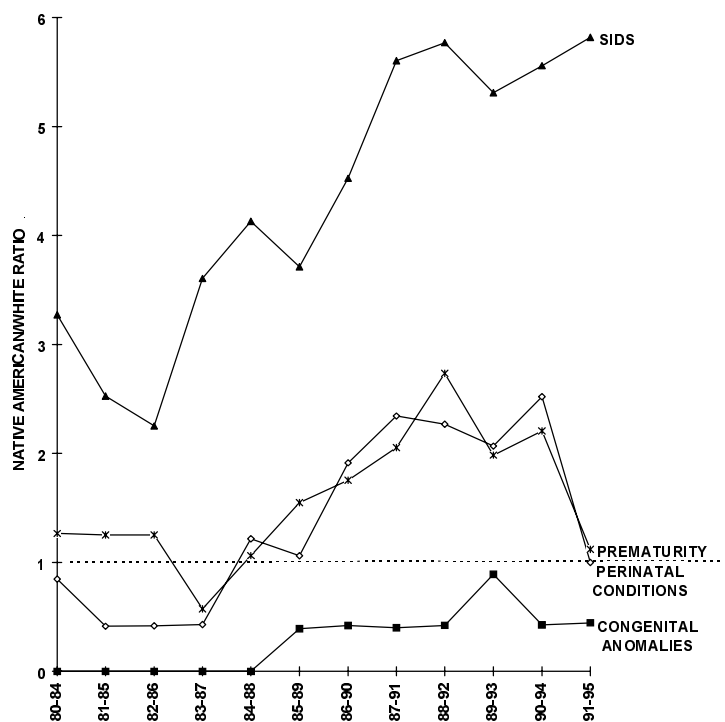
**FIGURE 3.6: CAUSES OF INFANT MORTALITY RATIO OF AFRICAN AMERICANS TO WHITES IN KING CO.
FIVE YEAR ROLLING AVERAGES, 1980-1995**



SOURCE: BIRTH AND DEATH CERTIFICATES.

Despite the overall favorable trend for the major causes of infant death in both African Americans and white races, the rates of prematurity and SIDS among African Americans have increased relative to whites and the higher rate of deaths due to perinatal conditions has persisted (Figure 3.6). Efforts to improve access to health and social services for preconceptual and pregnant African American women and increased educational programs regarding sleep safety and SIDS prevention in the African American community are needed.

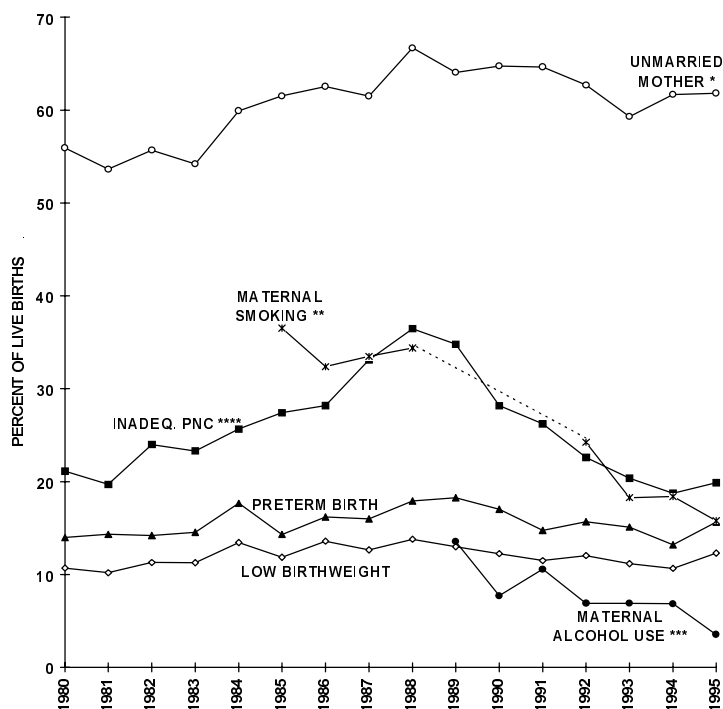
FIGURE 3.7: CAUSES OF INFANT MORTALITY RATIOS OF NATIVE AMERICANS TO WHITES IN KING CO. FIVE YEAR ROLLING AVERAGES, 1980-1995



SOURCE: BIRTH AND DEATH CERTIFICATES

Relative to whites, Native Americans continued to have much higher rates of SIDS (a ratio of 5.8 during the 1991-1995 period). These SIDS deaths account for nearly all of the difference between Native American and white infant mortality rates (Figure 3.7). Despite the relatively small number of Native American infant mortality cases, further investigation of this difference is warranted, particularly pertaining to infant sleep position and sleep safety issues among Native Americans.

FIGURE 3.8: BIRTH RISK FACTORS FOR AFRICAN AMERICANS IN KING COUNTY 1980-1995



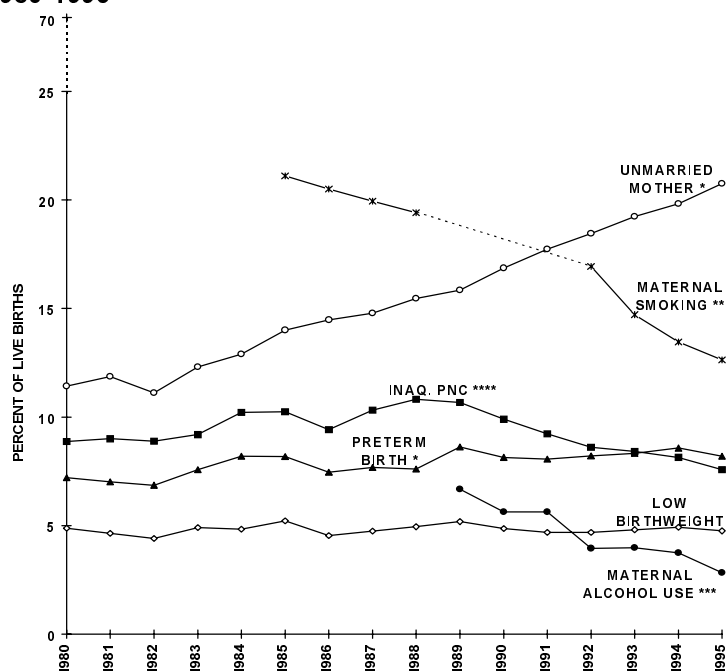
* THIS TREND FROM 1980-1995 IS A STATISTICALLY SIGNIFICANT INCREASE.
 ** THIS TREND FROM 1985-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
 *** THIS TREND FROM 1989-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
 **** THIS TREND FROM 1980-1988 IS A STATISTICALLY SIGNIFICANT INCREASE AND FROM 1988-1995 A STATISTICALLY SIGNIFICANT DECREASE.

SOURCE: BIRTH AND DEATH CERTIFICATES

3. CHANGING RISK FACTORS FOR INFANT MORTALITY AMONG AFRICAN AMERICANS AND WHITES

Among African Americans, recent downward trends in most birth risk factors have continued during the 1993-1995 period, with the exception that low birthweight and preterm birth rates have leveled (Figure 3.8). The decline in the rate of inadequate prenatal care for African Americans has slowed during 1993-1995 period while it has continued to decline for whites.

FIGURE 3.9: BIRTH RISK FACTORS IN KING COUNTY FOR WHITES IN KING COUNTY 1980-1995

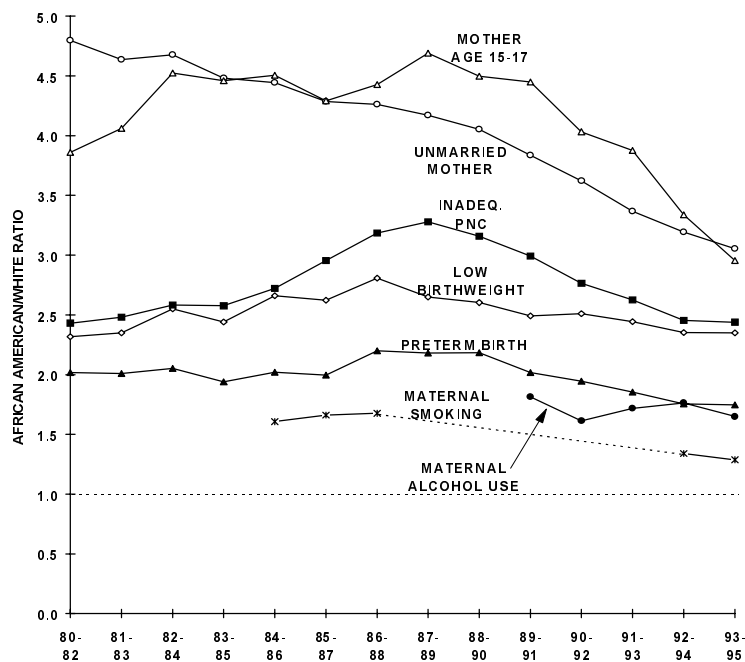


* THIS TREND FROM 1980-1995 IS A STATISTICALLY SIGNIFICANT INCREASE.
 ** THIS TREND FROM 1985-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
 *** THIS TREND FROM 1989-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.
 **** THIS TREND FROM 1980-1988 IS A STATISTICALLY SIGNIFICANT INCREASE AND FROM 1988-1995 IS A STATISTICALLY SIGNIFICANT DECREASE.

SOURCE: BIRTH AND DEATH CERTIFICATES.

Among whites, recent trends in birth risk factors have continued during the 1993-1995 period (Figure 3.9). The rates for maternal smoking and alcohol consumption continued to decline, whereas the rates for preterm birth and low birthweight have leveled. The proportion of unmarried mothers continued to increase. After an increase from 1980-1988, the trend for inadequate prenatal care has since declined.

FIGURE 3.10: BIRTH RISK FACTORS RATIO OF AFRICAN AMERICANS TO WHITES IN KING CO. THREE YEAR ROLLING AVERAGES, 1980-1995



SOURCE: BIRTH AND DEATH CERTIFICATES.

Relative to whites, the rates of unmarried mothers, preterm birth, maternal smoking, and adolescent births among African Americans have continued to decline, while the rate ratios for inadequate prenatal care, low birthweight, and maternal alcohol use remained the same (Figure 3.10).^b However, all birth risk factors continue to be more common among African Americans.

Further efforts to reduce the rates of birth risk factors among African Americans are indicated, especially in providing access to prenatal care, and in reducing low birthweight and prematurity.

^b Although the rates for African Americans and whites are presented in single years (Figures 3.8 and 3.9), the ratio between them showed great year-to-year fluctuations. Thus three-year rolling averages are shown, to smooth out these fluctuations.

SUMMARY

- During the 1991-1995 period, the infant mortality rates for African Americans and Native Americans were 2.4 and 1.9 times higher, respectively, than the rate among whites.
- The infant mortality rate for African Americans in the 1993-1995 period appeared higher than that during the 1992-1994 interval. However, data from forthcoming years are needed before drawing any conclusions that the declining trend of recent years has ended.
- The leading causes of death for white infants in the 1993-1995 period continued to be congenital anomalies, SIDS, deaths due to perinatal conditions, and deaths due to prematurity.
- The leading causes of death for African American infants in the 1993-1995 period were SIDS, deaths due to perinatal conditions, and prematurity. The increase in the proportion of deaths due to SIDS (30 percent in 1993-1995 period versus 21 percent in 1992-1994 period) accounted for most of the possible increase in African American infant mortality rate observed between the periods of 1992-1994 and 1993-1995.
- Relative to whites, Native Americans continued to have much higher rates of SIDS (a ratio of 5.8 during the 1991-1995 period).
- Among whites, recent downward trends in birth risk factors have continued during the 1993-1995 period. Among African Americans, recent downward trends in birth risk factors have continued during the 1993-1995 period, except for low birthweight and preterm births, where the rates have leveled. Furthermore, the decline in the rate of inadequate prenatal care for African Americans has slowed during 1993-1995 period.

